AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (original): A delayed decision feedback sequence estimation diversity receiver comprising:

means for extracting a plurality of reception signals by using a plurality of antennas when estimating a transmission signal from reception signals having undergone transmission path distortion;

means for combining impulse response sequences in transmission paths while canceling delayed wave components having the largest amplitudes in delayed wave component sequences in impulse response sequences in the respective transmission paths; and

means for performing signal estimation on the basis of a new impulse response sequence generated by combining the impulse response sequences.

2. (original): A delayed decision feedback sequence estimation diversity receiver comprising:

transmission path estimators for respectively obtaining transmission path impulse response sequences from a plurality of reception signals received through a plurality of antennas;

delayed wave detectors for respectively detecting components having the largest

amplitudes from delayed wave component sequences in impulse response sequences as output signals from said respective transmission path estimators;

a first delayed wave canceler for outputting a new signals from said respective transmission path estimators while canceling delayed wave components having the largest amplitudes on the basis of the output signals from said respective delayed wave detectors;

an estimation region detector for detecting a timing for signal estimation from the new combined impulse response sequence;

A3 Cont.

a second delayed wave canceler for receiving the output signals from said delayed wave detectors and outputting a new reception signal obtained by combining the reception signals while canceling delayed wave components having the largest amplitudes; and

a delayed decision feedback sequence estimator for performing signal estimation upon receiving the new combined reception signal, the new combined impulse response sequence, and the timing signal output from said estimation region detector, and outputting the estimation result.

3. (original): A receiver according to claim 2, wherein signal estimation ability is improved by combining antenna diversity with said delayed decision feedback sequence estimator.

4. (currently amended): A receiver according to claim 3, wherein characteristics of said delayed decision feedback sequence estimator are improved by canceling the delayed wave components by using the antenna diversity and a main delayed wave component that becomes a cause for a deterioration in the characteristics of said delayed decision feedback sequence

estimator.

5. (original): A receiver according to claim 4, wherein said receiver further comprises means for canceling the delayed response characteristics of the respective reception signals, extracting components having the largest amplitudes among delayed wave components from the obtained impulse responses, and combining a new impulse response with the reception signal while canceling the extracted components, and said delayed decision feedback sequence estimator performs signal estimation after the new impulse response and the reception signal are combined.

A3 Cont.

6. (currently amended): A delayed decision feedback sequence estimation method comprising:

~~the step of~~ extracting a plurality of reception signals by using a plurality of antennas when estimating a transmission signal from a reception signal having undergone transmission path distortion;

~~the step of~~ combining impulse response sequences in transmission paths while canceling delayed wave components having the largest amplitudes in delayed wave component sequences in impulse response sequences in the respective transmission paths; and

~~the step of~~ performing signal estimation on the basis of a new impulse response sequence generated by combining the impulse response sequences.